

09/95-4523

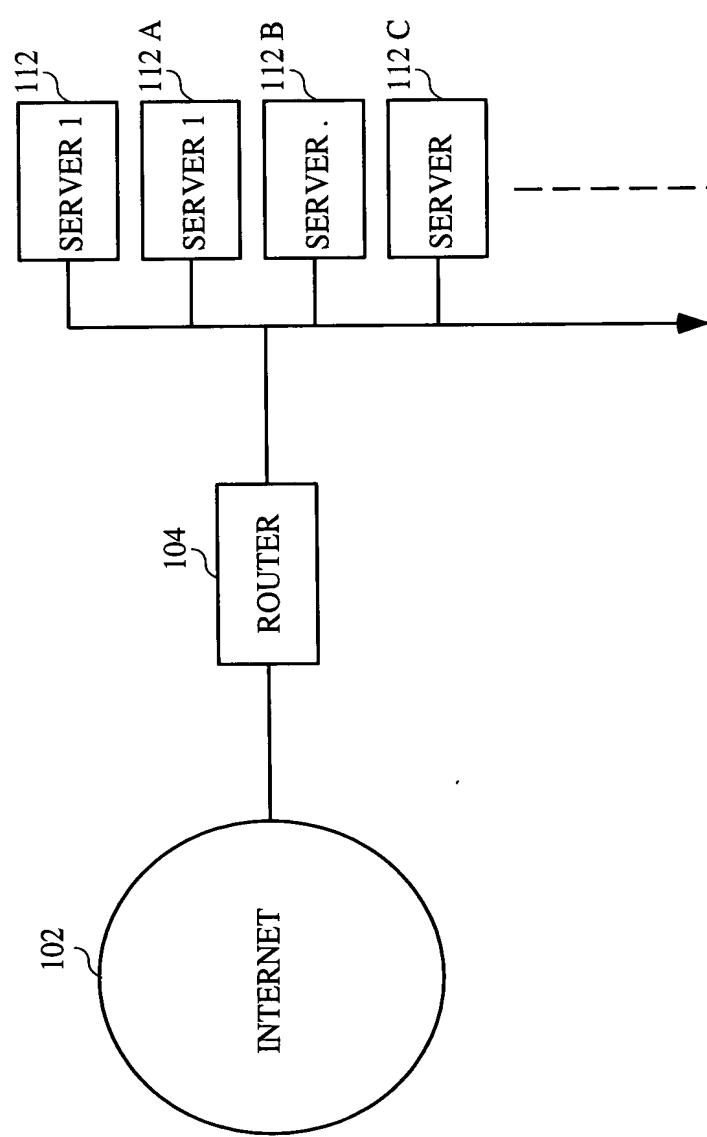


FIG. 1A

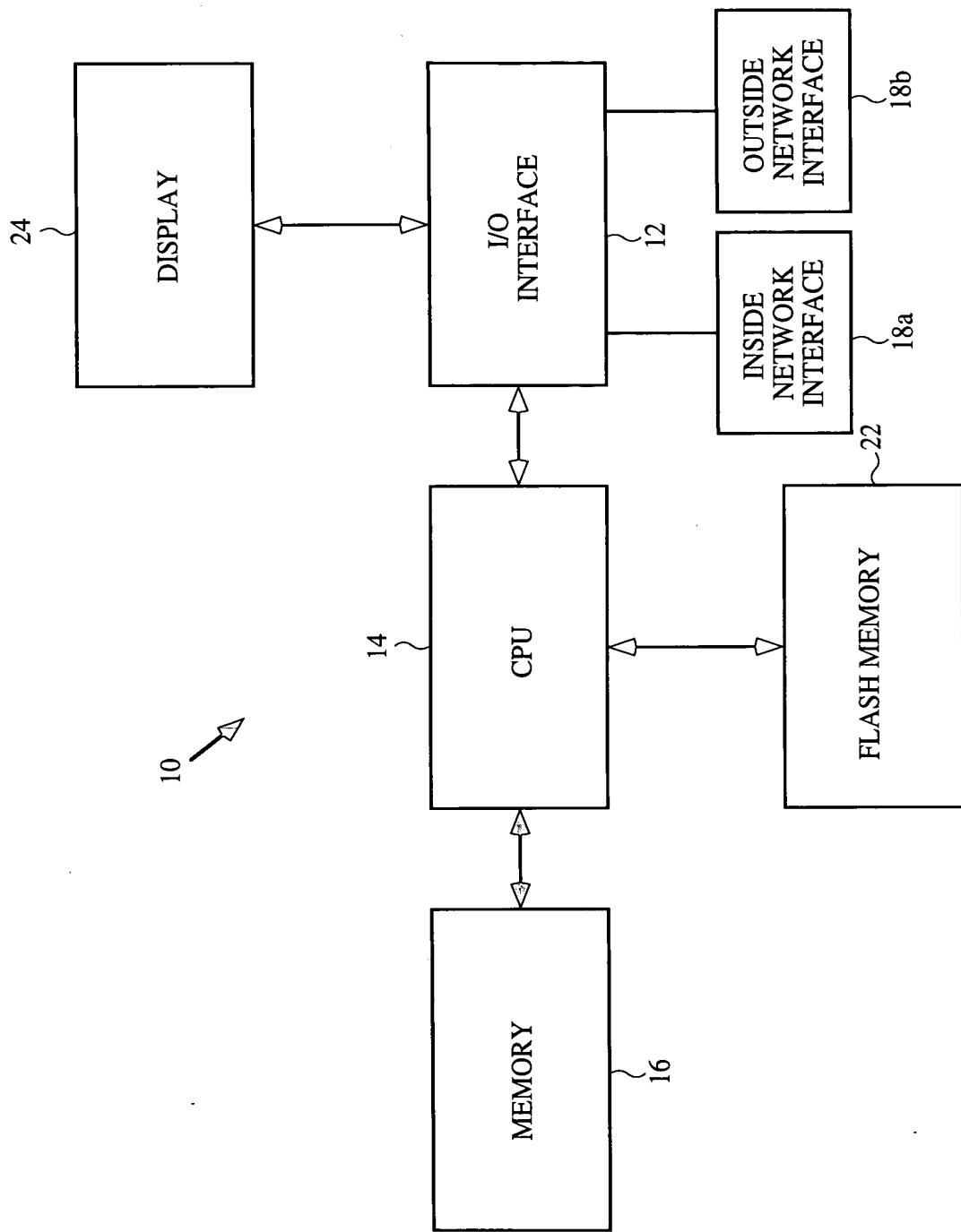


FIG. 1B

102 104 110 112 114 100

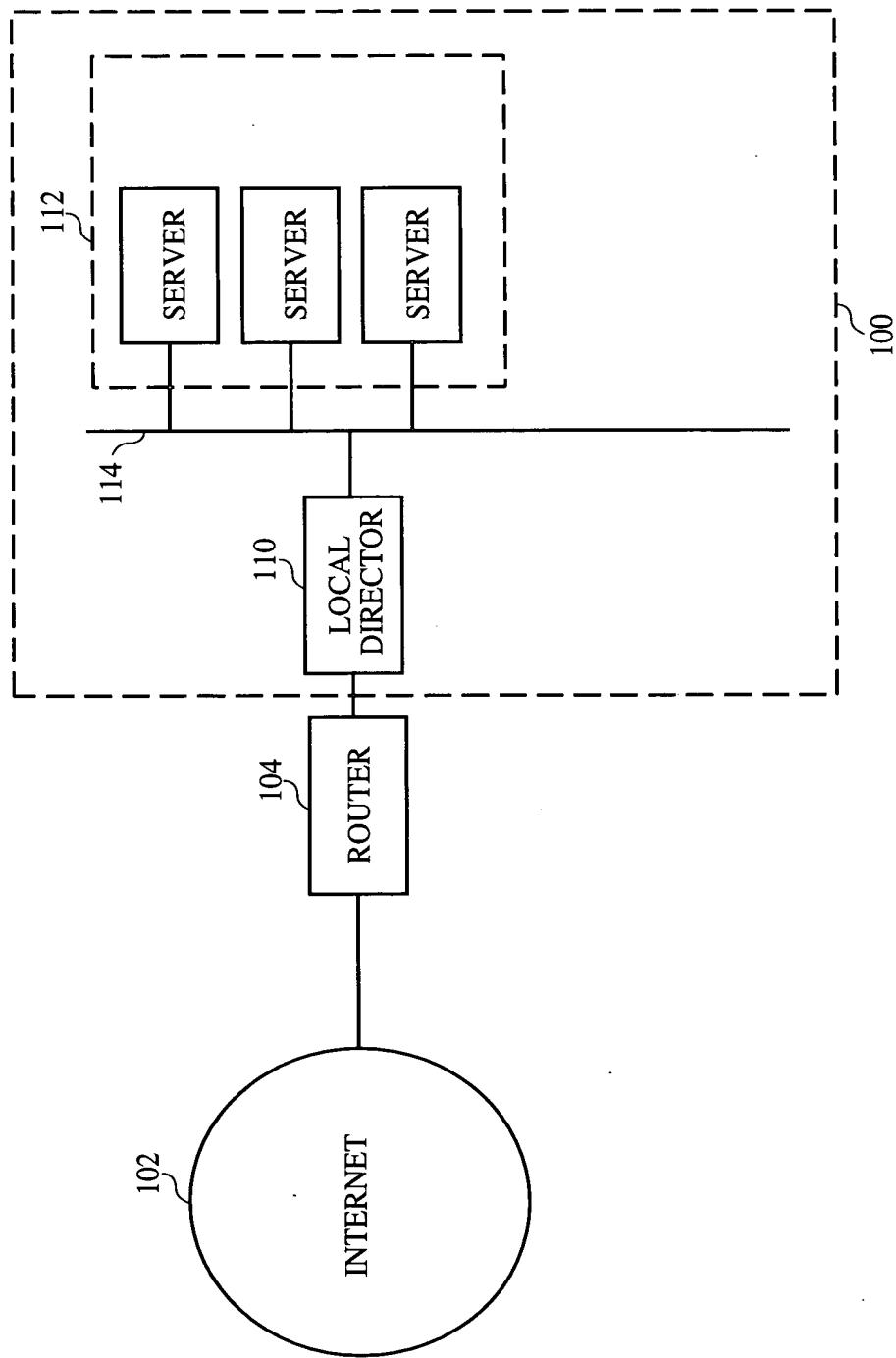


FIG. 1C

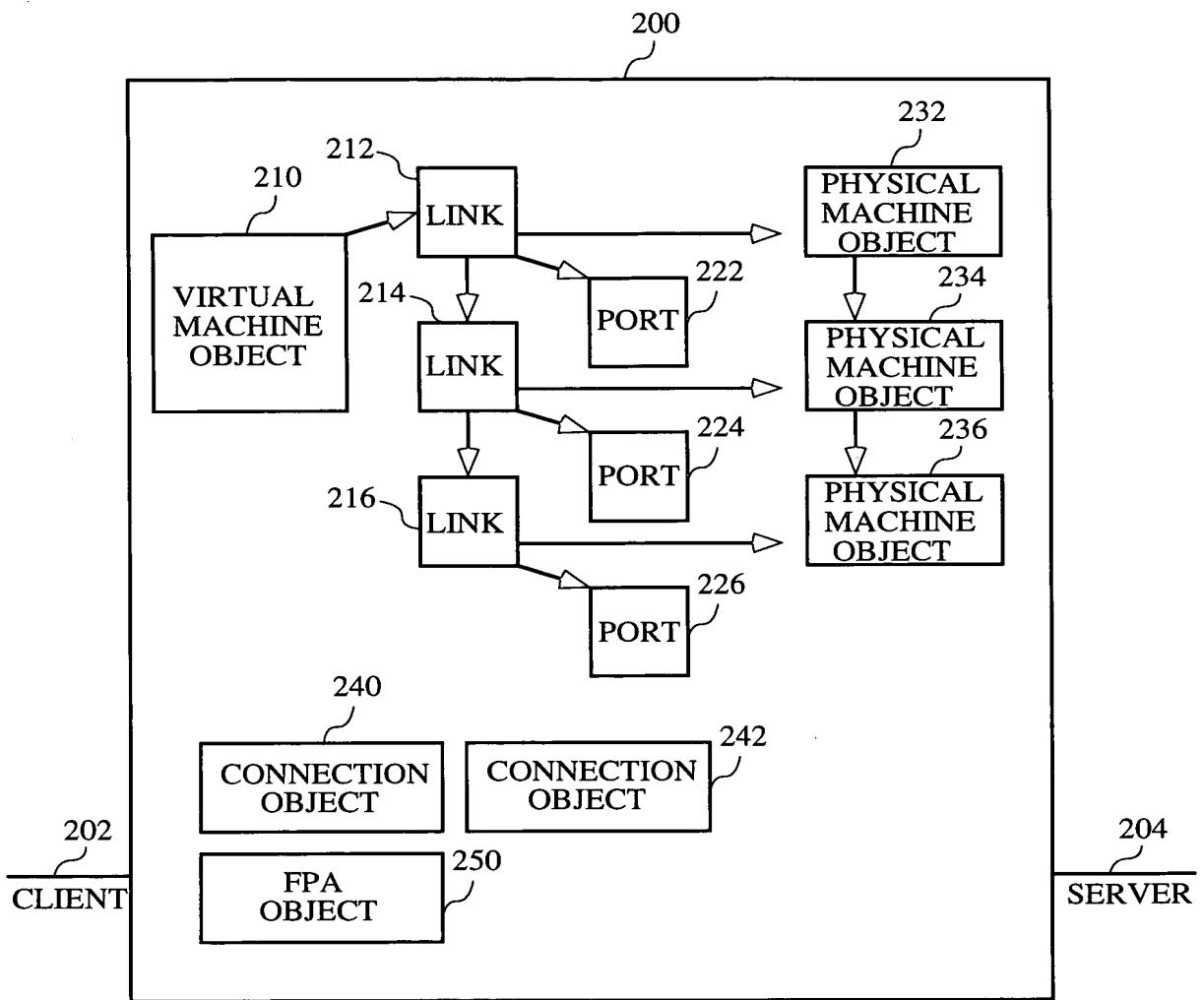


FIG. 2

VIRTUAL MACHINE OBJECT

VIRTUAL MACHINE IP ADDRESS	~304
POINTER TO LINK OBJECT	~306
POINTER TO LAST USED LINK OBJECT	~308
POINTER TO NEXT VIRTUAL MACHINE	~310
STATE (IN SERVICE, OUT OF SERVICE, FAILED)	~312
PHYSICAL MACHINE ASSOCIATION INTERVAL	~314

BACKUP POINTER	~316
DESIRED SESSION DISTRIBUTION SCHEME	~318
ACTUAL SESSION DISTRIBUTION SCHEME	~320

FIG. 3A

PHYSICAL MACHINE OBJECT

- | | |
|------|---|
| 350~ | POINTER TO NEXT PHYSICAL MACHINE OBJECT |
| 352~ | REAL IP ADDRESS OF THE PHYSICAL MACHINE |
| 354~ | LAST RESPONSE TIME OF THE PHYSICAL |
| 356~ | THE NUMBER OF VIRTUAL MACHINES
LINKED TO THE PHYSICAL MACHINE |
| 358~ | RESPONSE TIME BIASED BY AGE (PREDICTED RESPONSE TIME) |
| 360~ | AGE STAMP |
| 362~ | MAC ADDRESS OF THE PHYSICAL MACHINE |
| 364~ | NUMBER OF UNANSWERED SYN CONNECTIONS |
| 366~ | STATE OF THE PHYSICAL MACHINE (IN SERVICE, OUT OF
SERVICE, OR FAIL) |
| 368~ | NUMBER OF DITCHED CONNECTIONS |
| 370~ | CONNECTION FAILURE THRESHOLD |
| 371~ | NUMBER OF CONNECTIONS TO PHYSICAL MACHINE |
| 372~ | LOCAL PORT NUMBER |
| 373~ | MAXIMUM NUMBER OF ALLOWED CONNECTIONS |
| 374~ | CONNECTION TIMEOUT |
| 375~ | POINTER TO BACKUP MACHINE |
| 376~ | WEIGHT |
| 377~ | PORT VARIABLE |

FIG. 3B

CONNECTION OBJECT

326 ~ **POINTER TO NEXT CONNECTION OBJECT ON HASH CHAIN**

327 ~ **FOREIGN IP ADDRESS**

328 ~ **FOREIGN PORT NUMBER**

329 ~ **VIRTUAL MACHINE IP ADDRESS**

330 ~ **VIRTUAL MACHINE PORT NUMBER**

331 ~ **PHYSICAL MACHINE POINTER**

332 ~ **PHYSICAL MACHINE MAPPED PORT NUMBER**

333 ~ **MULTIPURPOSE TIMER**

334 ~ **PHYSICAL MACHINE PORT NUMBER**

FIG. 3C

372

FPA OBJECT

- 386 ~ [POINTER TO A PHYSICAL MACHINE OBJECT]
- 387 ~ [FOREIGN IP ADDRESS]
- 388 ~ [TIME OF LAST CONNECTION]
- 389 ~ [POINTERS TO OTHER FPA OBJECTS]

FIG. 3D

373

LINK OBJECT

- 391 ~ [POINTER TO NEXT LINK OBJECT]
- 392 ~ [POINTER TO A PHYSICAL MACHINE OBJECT]
- 393 ~ [POINTER TO A PORT OBJECT]

FIG. 3E

374

PORT OBJECT

- 395 ~ [POINTER TO NEXT PORT OBJECT]
- 396 ~ [PORT NUMBER AS VIEWED BY THE CLIENT]
- 397 ~ [PORT NUMBER AS MAPPED TO A PHYSICAL MACHINE PORT]

FIG. 3F

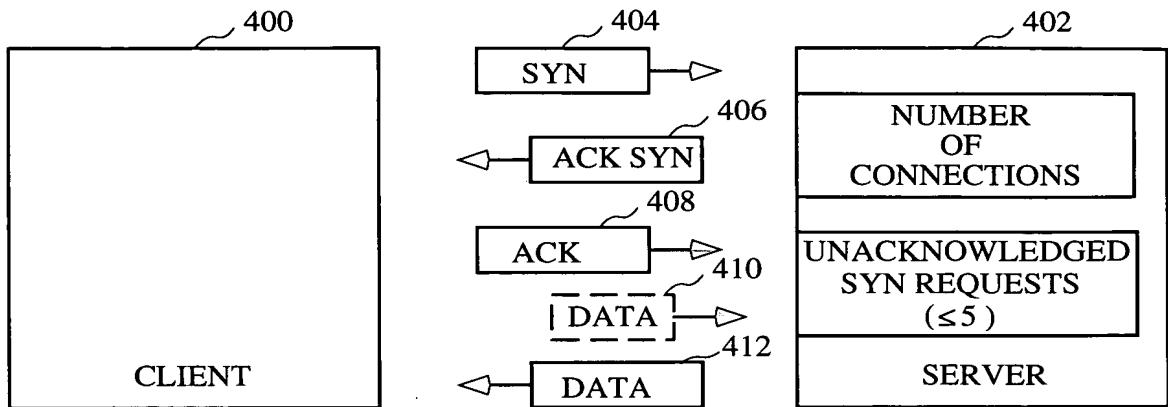
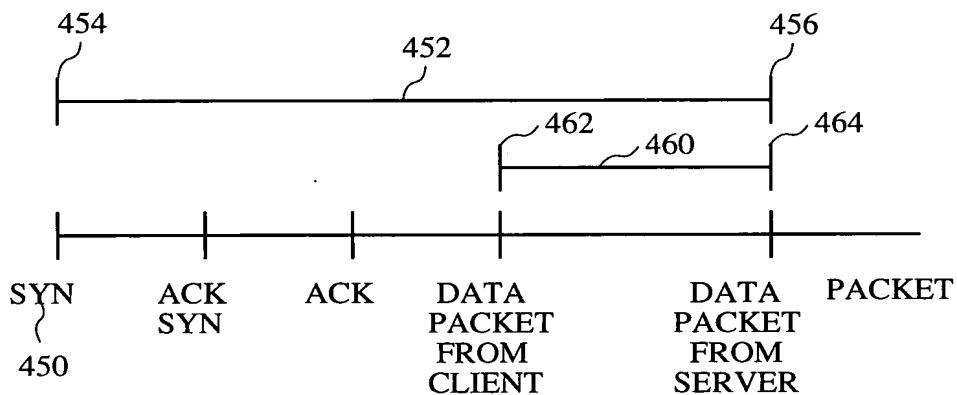


FIG. 4A



$$470 \sim R = \frac{I}{NC}$$

$$472 \sim PR = NC \cdot R - f(t)$$

$$474 \sim f(t) = \frac{t_{CURRENT} - t_{AGE STAMP}}{4}$$

FIG. 4B

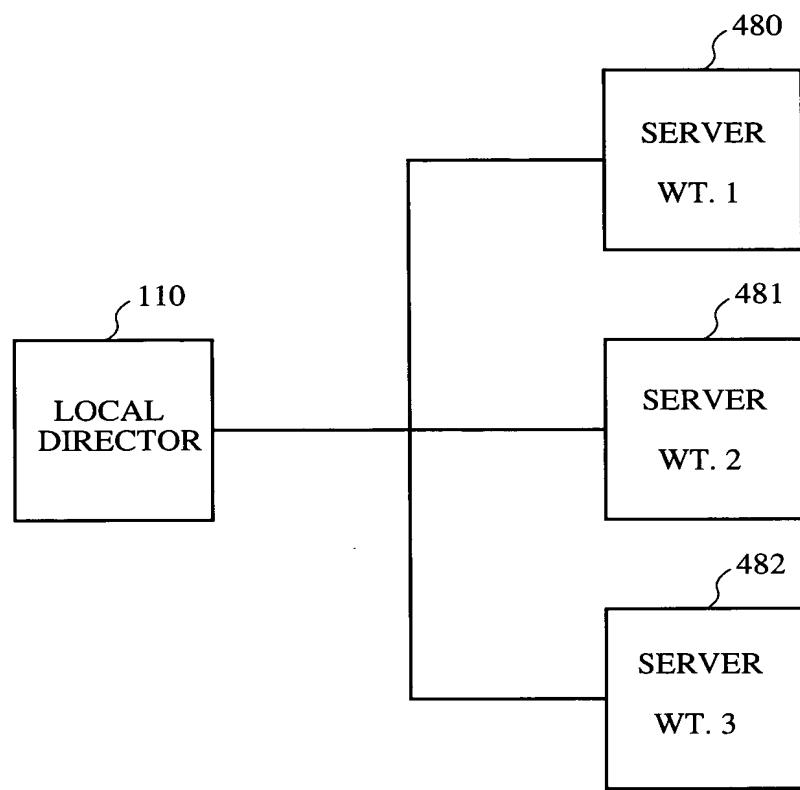


FIG. 4C

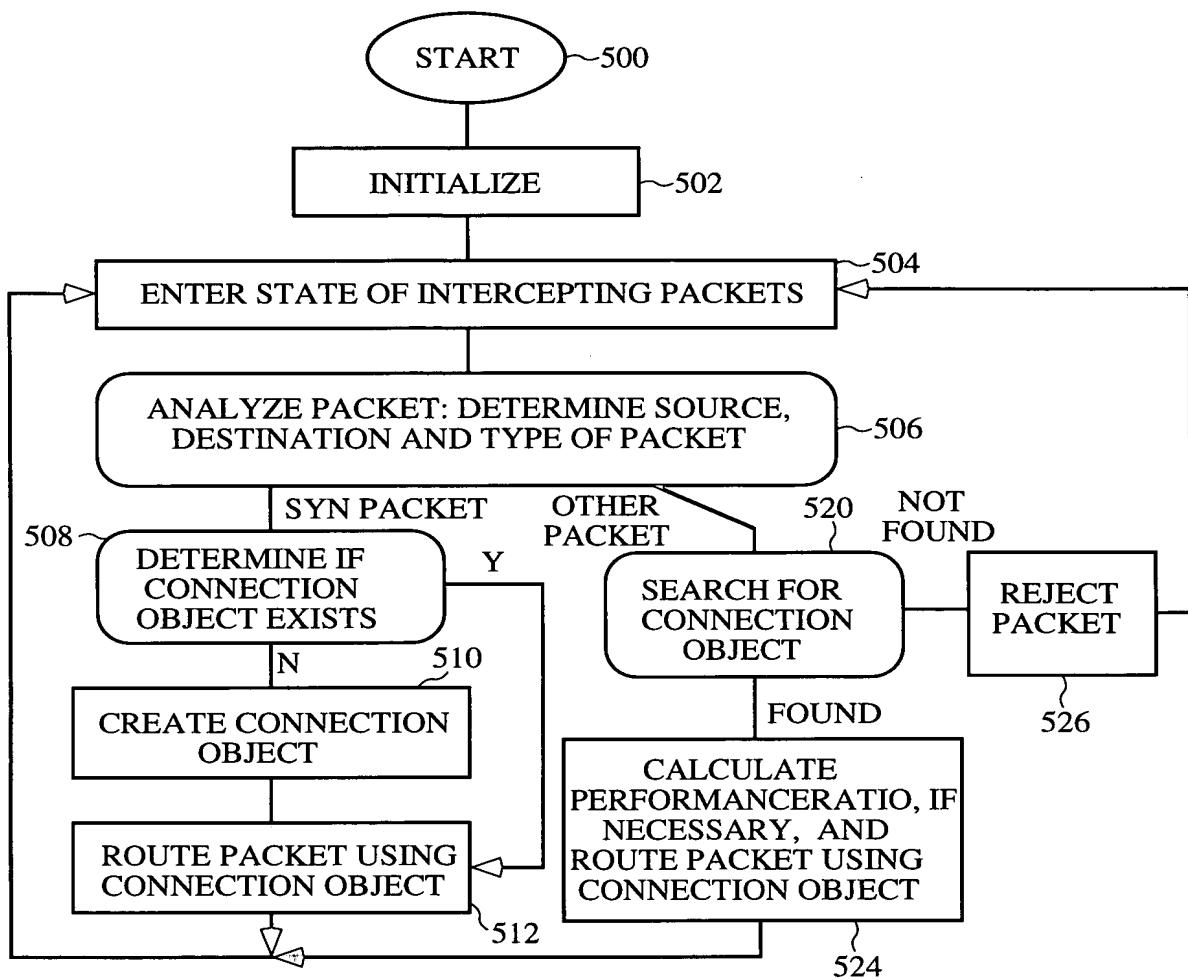


FIG. 5

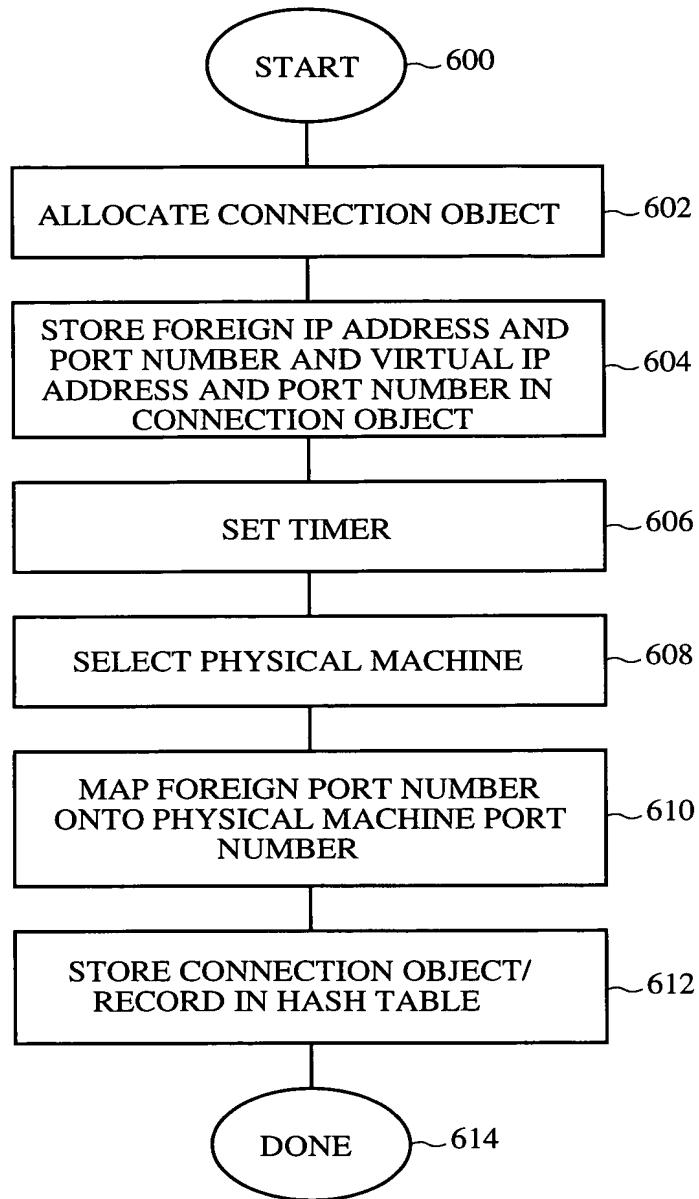


FIG. 6

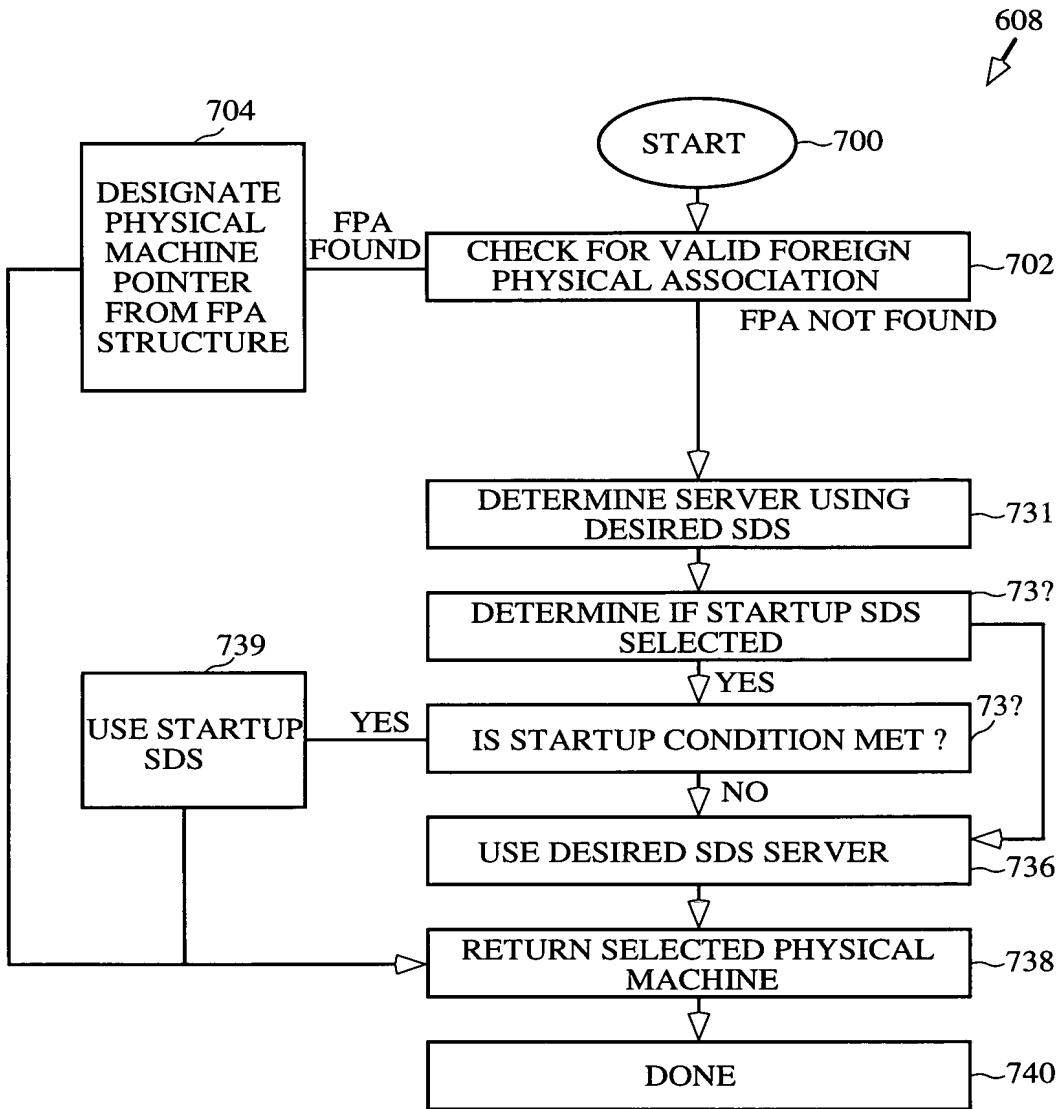


FIG. 7A

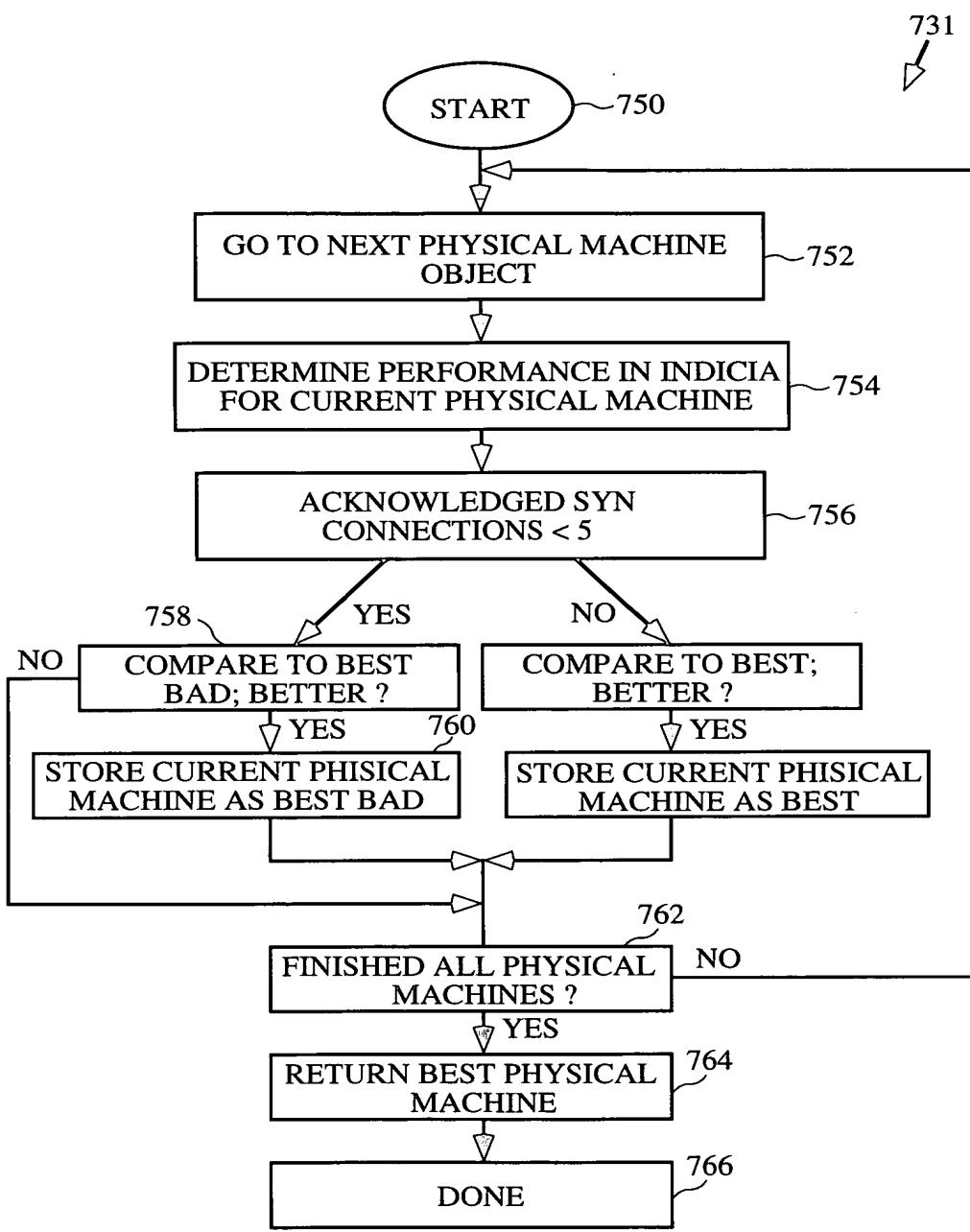


FIG. 7B

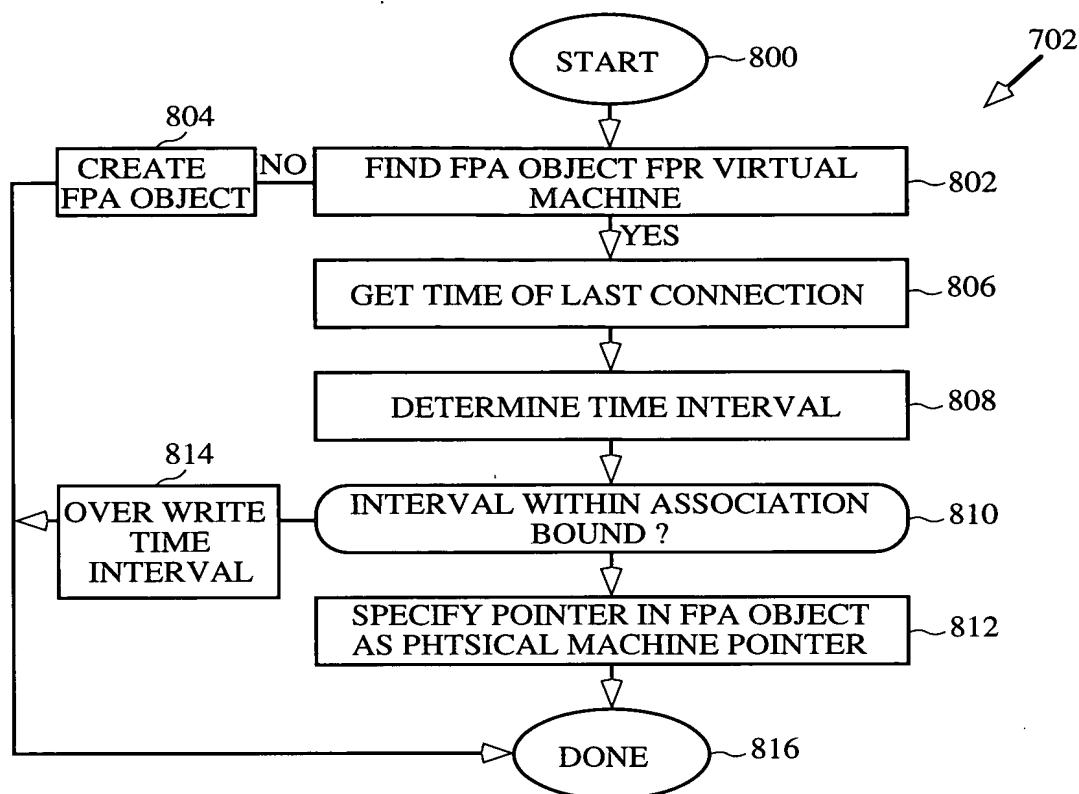


FIG. 8

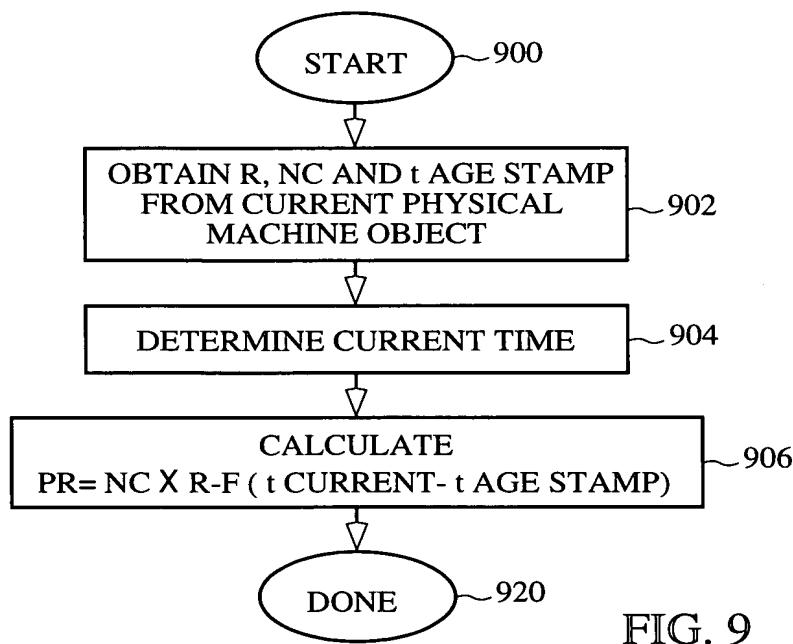


FIG. 9

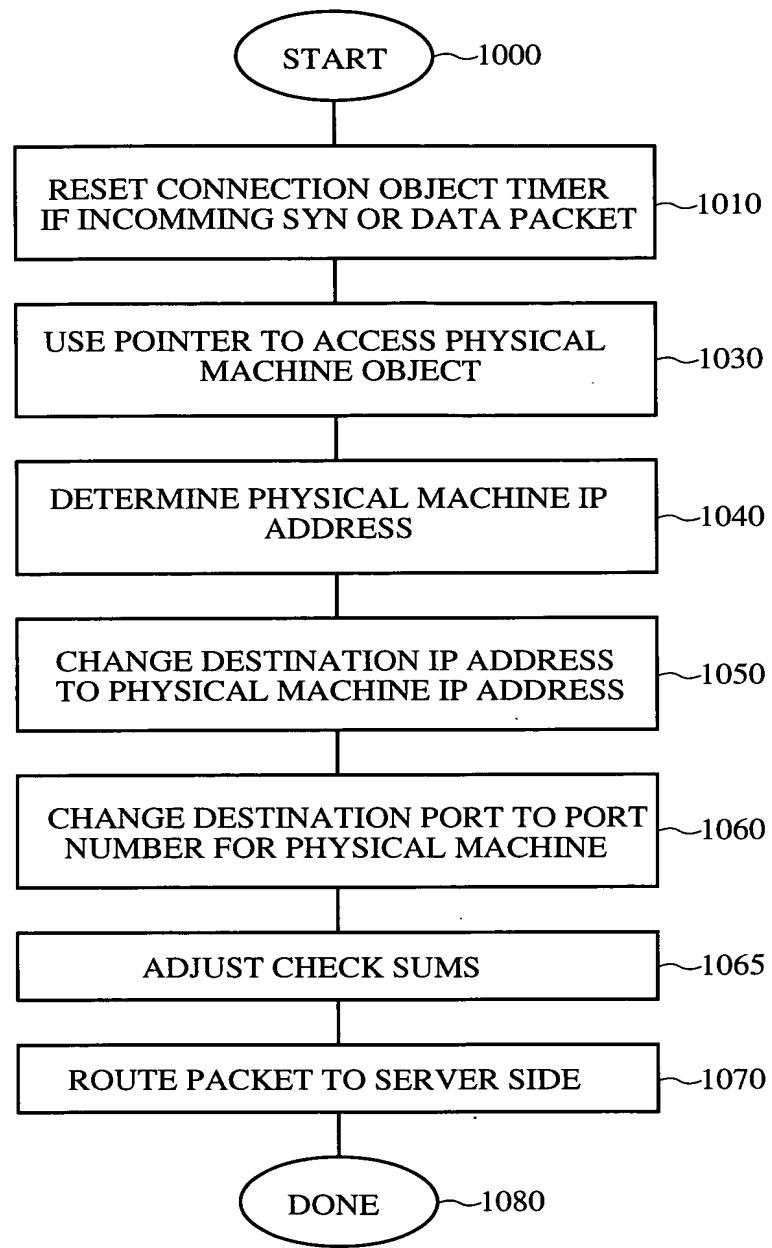


FIG. 10

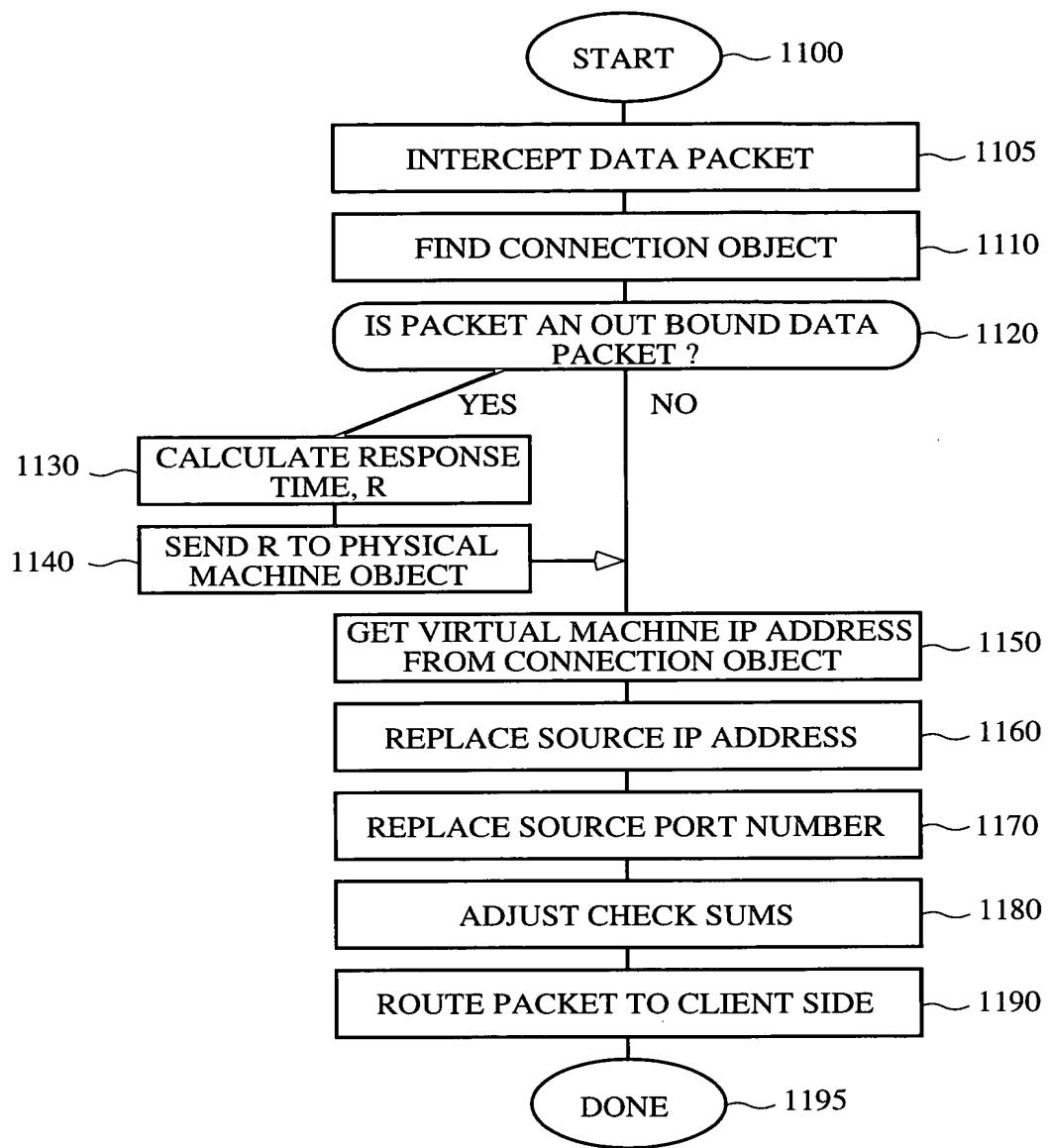


FIG. 11